

REMARKS

I. Summary of Rejections

Claims 22-24, 30, 37, 39-55, 57-64, 66-73, and 75-82 are pending in the application. Claims 22-24, 30, 37, 39-47, 49-55, 57-64, 66-73, and 75-82 are rejected under 35 U.S.C. §112, second paragraph as being indefinite; and claims 22-23, 37, 39-45, 55, 57-64, 66-73, and 75-81 are rejected under 35 U.S.C. §103(a) as being unpatentable over Franz (U.S. 6,541,676). With this response, claims 22, 23, 37, 40-43, 47, 49-52, 55, 58-61, 64, 67-70, 73, and 76-79 are amended. No new matter is added by amendment. Reconsideration of the claims, in light of the remarks that follow, is respectfully requested.

Applicants acknowledge the Examiner's indication that claims 24, 30, and 46-54 are allowable over the prior art.

II. Interview Summary

Applicants thank the Examiner for the telephonic interview of April 20, 2006. Applicants requested clarification by the Examiner of the rejections of the claims as being indefinite and as being unpatentable over Franz. Applicants discussed claim amendments and remarks, substantially as those presented herein, to address the Examiner's concerns.

Applicants agree with the Interview Summary mailed by the Examiner on April 24, 2006.

III. Indefiniteness Rejections

Claims 22-24, 30, 37, 39-47, 49-55, 57-64, 66-73, and 75-82 are rejected under 35 U.S.C. §112, second paragraph as being indefinite.

Claims 22-23, 30, 37, 46-47, 55, 64, and 73 are rejected as rendering the metes and bounds of the claims unclear. The Office Action indicated uncertainty as to whether the "wherein" clauses of these claims, such as "wherein the alloying elements are present in an amount sufficient to provide at least one performance characteristic at least 50% greater than the

platinum alone, said performance characteristic selected from the group consisting of yield strength, tensile strength and hardness,” as recited in claim 37, further limit the recited ranges of alloy compositions.

Applicants submit that the “wherein” clauses recited in claims 30, 37, 46-47, 55, 64, and 73 clearly limit the scope of the claims. In addition to meeting the alloy composition set for the in the claim, the alloy composition must also satisfy the performance characteristic(s) required by the claim. Not all possible alloy compositions will exhibit the performance characteristic(s) recited in the claims, however, for a given alloy composition that falls within the range recited in the claim, one of skill in the art would be able to straightforwardly determine whether that alloy also satisfies the performance characteristic(s) required by the claim. Measurements of yield strength, tensile strength, and hardness are routine, and it would not require undue experimentation to compare a property measured for a given alloy composition to that of one or more noble metals, which are well characterized. Thus, because the “wherein” clauses clearly limit the scope of the claims, Applicants respectfully request the Examiner withdraw the rejection.

Claims 22 and 23 have been amended to recite specific ranges of alloy compositions that exhibit one or more particular performance characteristics. Claim 22 now recites a flexible member that is “formed from an alloy consisting essentially of about 40 to 80 wt% platinum and about 20 to 60 wt% palladium, said member exhibiting at least one performance characteristic at least 50% greater than either noble metal alone.” The specification provides examples of alloys within this range that exhibit the recited performance characteristic(s) in Table 1 (pp. 11-12). Claim 23 now recites a flexible member that is “formed from an alloy comprising about 70 wt.% Au and about 30 wt.% Pt, said member exhibiting at least one performance characteristic at least 50% greater than either noble metal alone.” Applicants submit that the unambiguous ranges of alloy compositions and resulting performance characteristic(s), recited in amended claims 22 and 23, clearly define the limits of the claims, and therefore respectfully request the Examiner withdraw the rejection.

Claim 24 is also rejected as rendering the metes and bounds of the claim unclear. The claim recites an alloy “comprising about 66 wt.% Au, about 17 wt.% Ni and about 17 wt.% Cr,”

and the Office Action indicates that what is meant by “about” is unclear. However, the specification specifically notes that “[a]s used herein, the term ‘about’ when used to refer to wt.% in an alloy composition means $\pm 10\%$ of the reported wt.%.” (p. 6, lines 12-13). Applicants submit that this definition clearly identifies the range of alloy compositions recited in claim 24, and therefore respectfully request the Examiner withdraw the rejection.

Dependent claims 40-43, 49-52, 58-61, 67-70, and 76-79 are also rejected as rendering the metes and bounds of the claims unclear. The Office Action indicates that it is unclear whether the recited performance characteristic values further limit the alloy compositions to a narrower range than those recited in the corresponding base claims. Each of claims 40-43, 49-52, 58-61, 67-70, and 76-79 has been amended to recite that the “alloy is selected to provide” the recited performance characteristic. For example, claim 40 now recites that “the alloy is selected to provide a tensile strength of at least about 1000 MPa.” Not all alloy compositions recited in independent claim 37, from which claim 40 depends, will provide the recited tensile strength, but certain compositions will. Therefore, claim 40 further limits claim 37, from which it depends. Similarly, the performance characteristic(s) recited in amended dependent claims 41-43, 49-52, 58-61, 67-70, and 76-79 further limit the alloy composition to a more narrow range than that recited in the corresponding base claims 37, 47, 55, 64, and 73. Therefore, Applicants respectfully request the Examiner withdraw the rejection.

Applicants submit that the claim amendments and remarks above address the indefiniteness rejections of claims 22-24, 30, 37, 40-43, 46-47, 49-52, 55, 58-61, 64, 67-70, 73, and 76-79, and claims dependent thereon.

IV. Rejections over Franz

Claims 22-23, 37, 39-45, 55, 57-64, 66-73, and 75-81 are rejected under 35 U.S.C. §103(a) as being unpatentable over Franz (U.S. 6,541,676). Applicants respectfully traverse the rejection.

Claims 22, 23, 37, 55, 64, and 73 have been amended to recite “at least one freestanding flexible member that bends, flexes, twists, or is deformed during operation,” as recited in independent as amended. Support for the amendment can be found on p. 5 of the specification

as filed. “As used herein, a “flexible element” or a “flexible member” refers to that component of a MEMS device which bends, flexes, twists, or otherwise is deformed during operation of the MEMS device.”

Franz does not teach or suggest any member that bends, flexes, twists, or is deformed during operation, as required by claims 22, 23, 37, 55, 64, and 73. As discussed in greater detail in the Response dated January 5, 2006, Franz discloses membranes that include a metal-based layer that is supported by a ceramic support layer. The ceramic support layer “preferably has a rigidity and stability to maintain the metal-based layer as a substantially planar layer that is substantially free of defects and/or fractures” (col. 6, lines 8-12). Franz discloses designing the metal-based layer to remain substantially planar, and does not teach or suggest a flexible member that bends, flexes, twists, or is deformed during operation, as recited in claims 22, 23, 37, 55, 64, and 73.

Franz further does not teach or suggest any kind of alloy wherein the alloying elements(s) are “present in an amount sufficient to provide at least one performance characteristic at least 50% greater than either noble metal alone, said performance characteristic selected from the group consisting of yield strength, tensile strength and hardness,” as recited in claims 37, 55, 64, and 73. As discussed above, not all possible alloy compositions will exhibit the performance characteristic(s), but some do. Franz does not teach or suggest providing alloying element(s) in an amount sufficient to provide at least one of the recited performance characteristics.

Franz also does not teach or suggest a flexible member “formed from an alloy consisting essentially of about 40 to 80 wt% platinum and about 20 to 60 wt% palladium, said member exhibiting at least one performance characteristic at least 50% greater than either noble metal alone, said performance characteristic selected from the group consisting of yield strength, tensile strength and hardness,” as recited in claim 22 as amended. Franz also does not teach or suggest a flexible member “formed from an alloy comprising about 70 wt.% Au and about 30 wt.% Pt, said member exhibiting at least one performance characteristic at least 50% greater than either noble metal alone, said performance characteristic selected from the group consisting of yield strength, tensile strength and hardness,” as recited in claim 23 as amended. Franz does not

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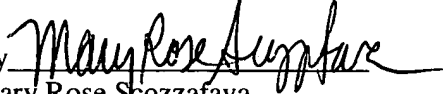
teach or suggest alloys having the specified compositions, or exhibiting the resulting performance characteristic(s), recited in claims 22 and 23.

For at least the reasons given above, claims 22-23, 37, 55, 64, and 73 as amended, and claims dependent thereon, are not unpatentable over Franz. Applicants respectfully request the Examiner withdraw the rejection.

In view of the above amendment, applicant believes the pending application is in condition for allowance. No fees are believed to be due at this time. However, please charge any fees, or credit any overpayments, to Deposit Account No. 08-0219.

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Respectfully submitted,

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